Langley Researcher

VOLUME 13, ISSUE 14 LANGLEY RESEARCH CENTER JULY 5, 1974

Noise Lab, Systems Building Dedicated

Despite a steady summer drizzle, Langley's new Aircraft Noise Reduction Laboratory was dedicated last week.

A quick dig in the damp dirt also marked the official groundbreaking for the new Systems Engineering Building and its solar collector field.

Guest speakers for the dual ceremony were led by Sen. Frank E. Moss of Utah, Chairman of the Senate Committee on Aeronautical and Space Sciences.

Other Congressional dignitaries who spoke at the ceremony were Rep. Thomas N. Downing of Virginia and Rep. John W. Wydler of New York.

The Honorable H. Guyford Stever, Director of the National Science Foundation, represented a NASA partner in energy research. NASA Headquarters was represented by Dr. Rocco A. Petrone, Associate Administrator, and Dr. Harrison H. Schmitt, new Assistant Administrator for Energy Programs.

Dr. Edgar Cortright presided at the ceremony, which was quickly moved into the Activities Building when rain dampened outdoor arrangements.

The guests all spoke briefly about NASA and Langley work that is seeking to improve the environment and make better use of such energy resources as solar power. Sen. Moss promised continued support of NASA projects that will attack environmental pollution and will save energy.

After short speeches, the group made a brief stop at the site of the Systems Engineering Building before dashing across the street to the Aircraft Noise Reduction Laboratory (ANRL) for a tour of the new facility.

Langley's ANRL will be used to study and help alleviate the problems of noise generated by aircraft. Work will include fundamental research in the generation and physical measurement of noise, human reactions to noise, and techniques for noise reduction.

The only lab of its kind in government or industry, the ANRL will support the nation's air transportation industry through basic research and development that will benefit commercial, military and general aviation, and high-speed ground transportation.

The lab is designed to accommodate many kinds of experimental studies into the basic properties, and the practical applications, of noise reduction procedures. There are four major research areas, each with its own distinct features, incorporated within the larger lab.

The first area is the Physics Laboratory, used to study

(Continued on page 6)

HIGH-LEVEL ribbon cutters helped dedicate the Aircraft Noise Reduction Laboratory. From left are Dr. Cortright; Rep. John W. Wydler of New York; Dr. Harrison H. Schmitt of NASA: Sen. Frank E Moss of Utah; Dr. Rocco A. Petrone of NASA; H. Guyford Stever of the National Science Foundation; and Rep. Thomas N. Downing of Virginia.

Noise Lab Dedication

the physical properties of materials in jet aircraft and engines. It is equipped with devices that permit basic measurements of the acoustic properties of materials under conditions that simulate the use of such materials in and around jet engine inlets and exhausts.

The second major area is devoted to Applications. It consists of two main rooms: an Anechoic Room and a Reverberation Room. Here will be tested the applications of noise reduction materials, devices and techniques that are evolved in the Physics Lab.

Each room in this area has its own foundation completely isolated from all surrounding structures. Each test room is equipped with equipment to control noise generation, and has instrumentation for the precise measurement and analysis of noise.

The third area is the Simulation Area. This part of the lab houses work in experiments that are concerned with the reactions of people to noise. The area contains an Exterior Affects Simulation Lab, in which simulation will be made of noise patterns produced by low-flying aircraft. The Interior Affects Simulation Lab will demonstrate situations produced by aircraft as they are experienced by people indoors.

The fourth main area is a two-story Engineering Support Area, which is office space for the 40 to 60 scientists and engineers who work in the lab.

The building encloses about 40,700 square feet, and cost approximately $5.7 million.

Homer G. Morgan is Chief of the Acoustics and Noise Reduction Division, which has supervision of the ANRL. Harvey H. Hubbard is Assistant Chief and acting Head of the Acoustics Branch.

The ANRL houses the Division Office, the ANRL Operations Group, managed by Robert A. Golub; the Aircraft Noise Prediction Office, headed by John P. Raney; and the Noise Control Branch, headed by Domenic J. Maglieri.